



Developing solutions through innovation and insight.



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Wayne Perry, Inc. (WPI), established more than 40 years ago as a company specializing in fueling facility construction and maintenance, has become a recognized leader in the environmental and fueling services industry while staying true to its roots in construction.

Today WPI employs a multi-disciplinary work force that includes skilled tradesmen, equipment operators, environmental technicians, scientists, professional engineers and geologists. Our ability to develop, test and implement new technologies has resulted in substantial cost and time-savings for our clients and garnered numerous awards, including Shell Oil Company's Consultant of the Year in 2001, 2002 and 2003.

Since our inception, we have diligently adhered to our founder's basic business philosophy of exceptional service and low overhead. The success of this formula is best illustrated by two simple facts: we're still doing business today with our very first client, and WPI employees have been with the firm an average of 18 years.

WPI's exemplary record of loyalty is the result of our commitment to the health and safety of our employees, clients and communities. This is demonstrated through the integration of detailed safety planning on every project, and the requirement that our employees maintain certifications in training programs such as OSHA, HAZWOPER and API Work Safe Certifications.

We invite you to consider WPI for your environmental engineering and/or fueling facility construction/maintenance needs. We're confident it's a relationship you'll want to keep.





WPI first sampled groundwater for environmental purposes in 1974, and has provided large-scale groundwater monitoring services since 1981. WPI offers some of the lowest per-well sampling rates in the industry. In fact, an in-house client memorandum reported that the use of WPI's groundwater monitoring services reduced the overall costs of its quarterly groundwater monitoring compliance program from over \$3 million to less than one \$1 million per year.

The company has extensive experience with groundwater monitoring requirements in every California county, as well as the states of Arizona, Nevada, Oregon and Washington. Unlike other companies providing commercial scale groundwater monitoring services, WPI has the in-house capability to produce groundwater monitoring reports that meet the requirements of any regulatory agency.

AT THE FOREFRONT OF INNOVATIVE TECHNOLOGIES.

1986 Invented and constructed the soil vapor recovery engine – one of the first soil vapor extraction systems to be granted a various locations permit to operate by the South Coast Air Quality Management District.

1988 Designed and manufactured a combination oil-water separator/surge tank pump and control system for use at gasoline stations, where space is usually at a premium.

1992 Began experimentation on advanced oxidation treatment technology, and developed proprietary catalyzing agents that enhanced the creation of hydroxyl radicals used for the in-situ oxidation of contaminants in soil and groundwater.

1996 Designed pilot testing systems to treat methyl tertiary butyl ether (MTBE) impacted groundwater in the Charnock Subbasin drinking water aquifer. The system was put into operation in 1998, and has continued since that time.

2003 Developed in-well systems to organize equipment and provide double containment at a lower cost than conventional piping systems. These systems reduced labor and material costs for installation, and provided provisions for future modifications and expansion without extra trenching or removal of existing piping.

2005 Designed and constructed a pilot system for biological removal of selenium from groundwater at a facility in Culver City. Groundwater at the site contained naturally occurring selenium at concentrations above discharge permit requirements. Completed in

2007, experiments with the pilot system achieved the goal of reducing selenium to below the discharge permit requirement of 4 micrograms per liter.

2008 Completed construction of a full-scale biological selenium treatment system, including installation of bioreactor vessels, computer-controlled pumps and instrumentation for flow/level monitoring. The biological system is currently operating on an experimental basis, with a treatment goal flow rate of 50 gpm. Work is now directed toward automating system functions and improving the consistency of selenium removal.

UNIQUE

TURNKEY OPERATION

WPI has the personnel, equipment, experience and depth to handle any groundwater monitoring assignment.

Our field crews have extensive experience with groundwater monitoring requirements in every California county, as well as the states of Arizona, Nevada, Oregon and Washington.

Groundwater monitoring trucks maintain a complete supply of parts for well repairs that do not require construction activities. These incidental repairs are provided as part of our monitoring service.

Every groundwater monitoring crew is supported by an administrative services staff member and a professional geologist or engineer. These employees are always available to the crew for unanticipated field situations.

Unlike other companies providing commercial scale groundwater monitoring services, WPI has the in-house capability to produce monitoring reports which meet the requirements of any regulatory agency.

Our reports typically include CAD drawings showing groundwater elevations, and iso-concentration plots of contaminant distribution and contaminant trend analyses.





WPI designed and permitted a remediation system to remove petroleum fuel contaminants from soil and groundwater. The system construction included installation of approximately 17,000 feet of piping and electronically controlled groundwater extraction pumps capable of adjusting to fluctuations in groundwater levels caused by tidal influence.



WPI's engineering involvement in large-scale soil and groundwater projects began in early 1997. In 1998, WPI designed and built the 400 gpm Tuller Avenue Treatment system to remove petroleum fuel contaminants from the City of Santa Monica's drinking water aquifer. This system remains in operation today, and is maintained by WPI's OM&M Department.



WPI constructed and installed a 600 gpm groundwater remediation system (including a pre-fabricated steel building, and all remediation, control and leak detection equipment) to remove chlorinated solvents from a drinking water aquifer. Construction and installation was completed within the project schedule.



WPI provides O&M services at about 100 sites throughout the western United States. These range in size and complexity from simple vapor extraction/groundwater treatment systems addressing areas of about 1,000 square feet, to complex treatment systems designed to recover soil and groundwater contaminants from an area of 9,000 acres. Whether large or small, the O&M Group has developed an organized approach that ensures system optimization and maximizes run time.

Key components of this approach are: Site Safety • Permitting and Permit Compliance • System Optimization and Balance • Data Collection and Reporting • Continued Research and Development

WPI equips each WPI technician with all necessary monitoring, sampling, repair and testing equipment. This ensures that each arrives at the job site, ready for any assignment and capable of dealing with changing conditions.

OPERATIONS AND MAINTENANCE SERVICES

WPI's O&M Department installs, operates and maintains a wide variety of remediation systems.

VAPOR EXTRACTION TECHNOLOGIES

- Fuel-fired Thermal and Thermal/Catalytic Oxidizers with Extraction Rates up to 2,000 cubic feet per minute (cfpm)
- All Electric Catalytic Oxidizers with Extraction Rates up to 300 Cubic Feet per Minute
- Regenerative Multiple Bed Thermal Oxidizers with Extraction Rates up to 10,000 cfpm
- Refrigerated Condenser Vapor Collector Systems with Extraction Rates up to 300 cfpm
- Carbon Adsorption Systems with Extraction Rates up to 6,000 cfpm
- Landfill Gas Collection and Flare Systems

- Chlorinated Solvent Extraction Systems with Effluent Acid Elimination Scrubbers

GROUNDWATER TREATMENT SYSTEMS

OIL/WATER SEPARATORS

CARBON ADSORPTION SYSTEMS UP TO 8,000 GALLONS PER MINUTE (GPM)

RESIN ADSORPTION SYSTEMS UP TO 250 (GPM)

ADVANCED OXIDATION SYSTEMS

- Peroxide-Ultraviolet Radiation
 - Ozone-Peroxide
 - In-situ Fenton's reagent Injection
 - Electron-Donor Systems
- #### AIR STRIPPERS UP TO 4,000 (GPM)
- Packed Tower
 - Tray-Type

BIO-REMEDICATION SYSTEMS

- Bio-Granular Activated Charcoal Systems up to 400 gpm
- In-situ Systems Using Concentrated Oxygen Injection

ION-EXCHANGE SYSTEMS

AIR AND OXYGEN SPARGE SYSTEMS

GROUNDWATER PUMP SYSTEMS

ELECTRIC SUBMERSIBLE PUMPS UP TO 1200 GPM

DEEP-WELL TURBINE AND BOWL PUMPS UP TO 200 HP

PNEUMATIC PUMPS

- Controller-less Pumps
- Level Controlled Pumps
- Dense Non-Aqueous Phase Liquid (DNAPL) Pumps
- Piston Pumps

- Bladder and Flexible/Axial/Peristaltic (F.A.P.) Pumps
- Landfill Leachate Pumps

SEPARATE PHASE SKIMMERS

COMBINATION WATER TABLE DEPRESSION/SKIMMER SYSTEMS

WATER/SEPARATE PHASE HYDROCARBON INTERFACE-TRACKING ELECTRIC SKIMMERS

BLADDER AND FAP PUMPS

REMEDIATION SAMPLING SYSTEMS

- Low Flow and Full Purge
- Sampling Systems



REPRESENTATIVE CLIENTS

Shell Oil Company
World Oil Company
The Source Group
Hargis + Associates
Thrifty Oil Co.
Brown & Caldwell
Kleinfelder
Conoco/Phillips
Chevron/Texaco
TOSCO Marketing Company
Al-Sal Oil Company
California Department of Transportation
Hargis + Associates
ARCO
Hughes/Raytheon
TRC Solution
Costco Wholesale, Inc.
City of Long Beach
City of Glendale
City of Newport Beach
City of Azusa
The Boeing Company
Chemical Waste Management
Department of Homeland Security
Port of Long Beach
Holguin, Fahan & Associates, Inc.
Long Beach Energy
Kinder Morgan Energy Partners
Circle K Stores, Inc.
Los Angeles County Department of Public Works
Travis Air Force Base
Southern California Gas Company

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